Developments with the Transformed Labour Force Survey

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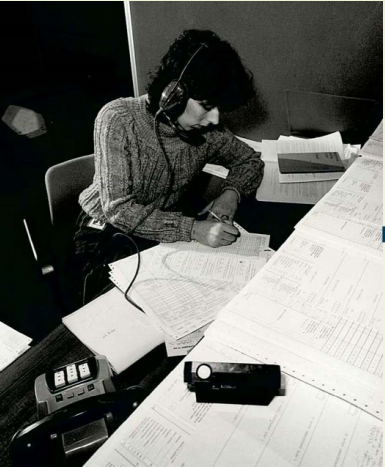**29 November 2023**

Office for National Statistics

Celebrating 50 years of the LFS

In the 50th year since the Labour Force Survey started collecting statistics on the labour market, demographics, and the various aspects of people's every day lives, evolving over time to the changing needs and shape of society, we are now transforming to bring us fully into the digital age

Office for National Statistics

New Beyond GDP measures for the UK: a workplan for measuring inclusive income

Planned work, as well as timeline estimates, for projects feeding into a new measure of "inclusive income", aligned with the concept of "inclusive wealth".

Families and households in the UK: 2021

Trends in living arrangements including families (with and without dependent children), people living alone and people in shared accommodation, broken down by size and type of household.

Subnational estimates of dwellings and households by tenure, England: 2021

Annual estimates which provide the breakdown of dwellings and households by tenure for local authority districts in England.

Disability and housing, UK: 2019

Housing outcomes for disabled adults, with analysis by age, sex, impairment type and country using Annual Population Survey (APS) data.

Understanding changes in self-employment in the UK: January 2019 to March 2022

An exploration of recent falls in self-employment, focusing on flows to other labour market statuses and changes in the characteristics of self-employed workers.
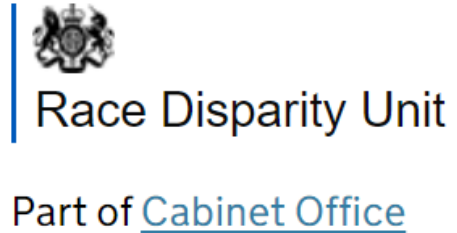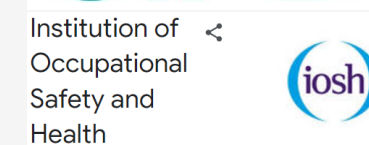
Adult smoking habits in the UK Statistical bulletins

Cigarette smoking habits among adults in the UK, including the proportion of people who smoke, demographic breakdowns, changes over time and use of e-cigarettes.

Living longer: trends in subnational ageing across the UK

Current and projected trends in population ageing for local authorities, regions and countries across the UK based on 2019 estimates and 2018-based subnational population projections.

Secure Research Service

UK Data Service

nomis
official census and labour market statistics

techUK
FOR WHAT COMES NEXT

HSE

BRITISH SAFETY COUNCIL

CIPD

Institution of Occupational Safety and Health
iosh

TUC Changing the world of work for good

United Nations

SUSTAINABLE DEVELOPMENT GOALS

Government Equalities Office

Race Disparity Unit
Part of Cabinet Office

Social Mobility Commission
State of the nation 2021:
Social mobility and the pandemic

Living Wage Foundation

RTPI
Royal Town Planning Institute

lepnetwork

GMCA GREATER MANCHESTER COMBINED AUTHORITY

MAYOR OF LONDON

Local Government Association

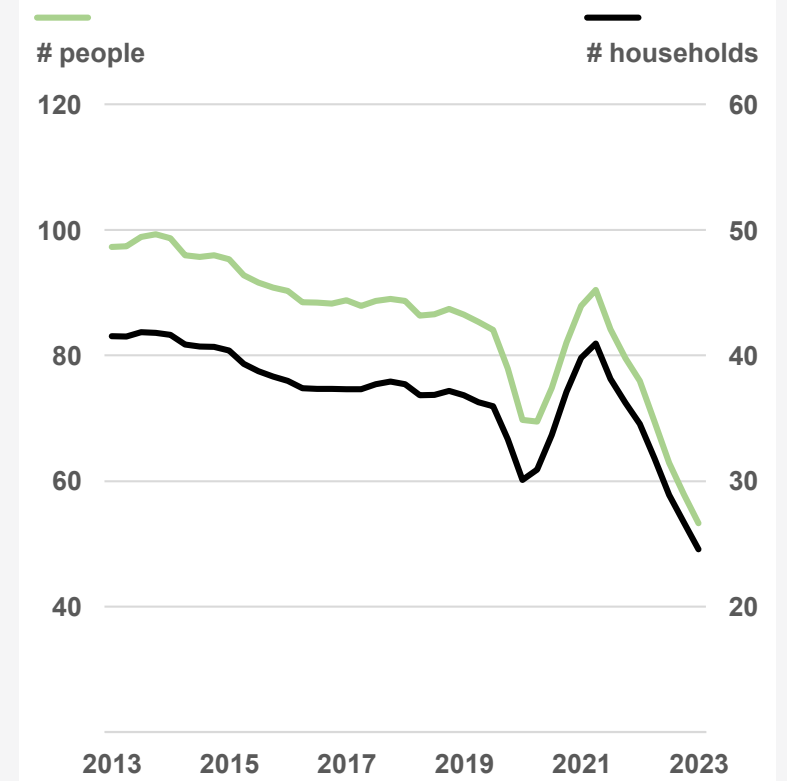Department for Business, Energy & Industrial Strategy

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Impetus to transform the Labour Force Survey

- We've continually adjusted the design of the survey accounting for changes in the population, economy and political environment without reviewing the questionnaire structure, flow and content

- We have seen a steady decline in response rates over the last 25 years, for a variety of reasons including:
  - confidentiality concerns
  - mistrust in government
  - increase in gated communities
  - increasing single person, temporary households

- Increasing industry-wide complexities including:
  - difficulty recruiting interviewers and high turnover
  - public fatigue with taking surveys and calls
  - increasing use of rental properties and second homes
  - global move to online interactions

Achieved number of LFS interviews, UK
(in thousands, includes imputation)

people — # households

# people			# households
120			60
100			50
80			40
60			30
40			20

2013   2015   2017   2019   2021   2023

The transformation

Objectives of transforming the survey

Reduced bias

More efficient operation

More representative data

Taking an online-first approach with an adaptive and responsive design to target resources where most efficient to maximise response rates, quality and representativeness through:

- Larger overall sample size

- More robust processing systems

- Adaptive design to reduce bias

- More flexible and able to respond faster to change

- Updated and upgraded questions and responses

Future aims include integrating administrative data, increasing timeliness and potentially adding new survey requirements
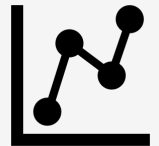
Survey design principles

Putting Quality first

Focus on continuous improvement across a range of quality measures including statistical and process quality

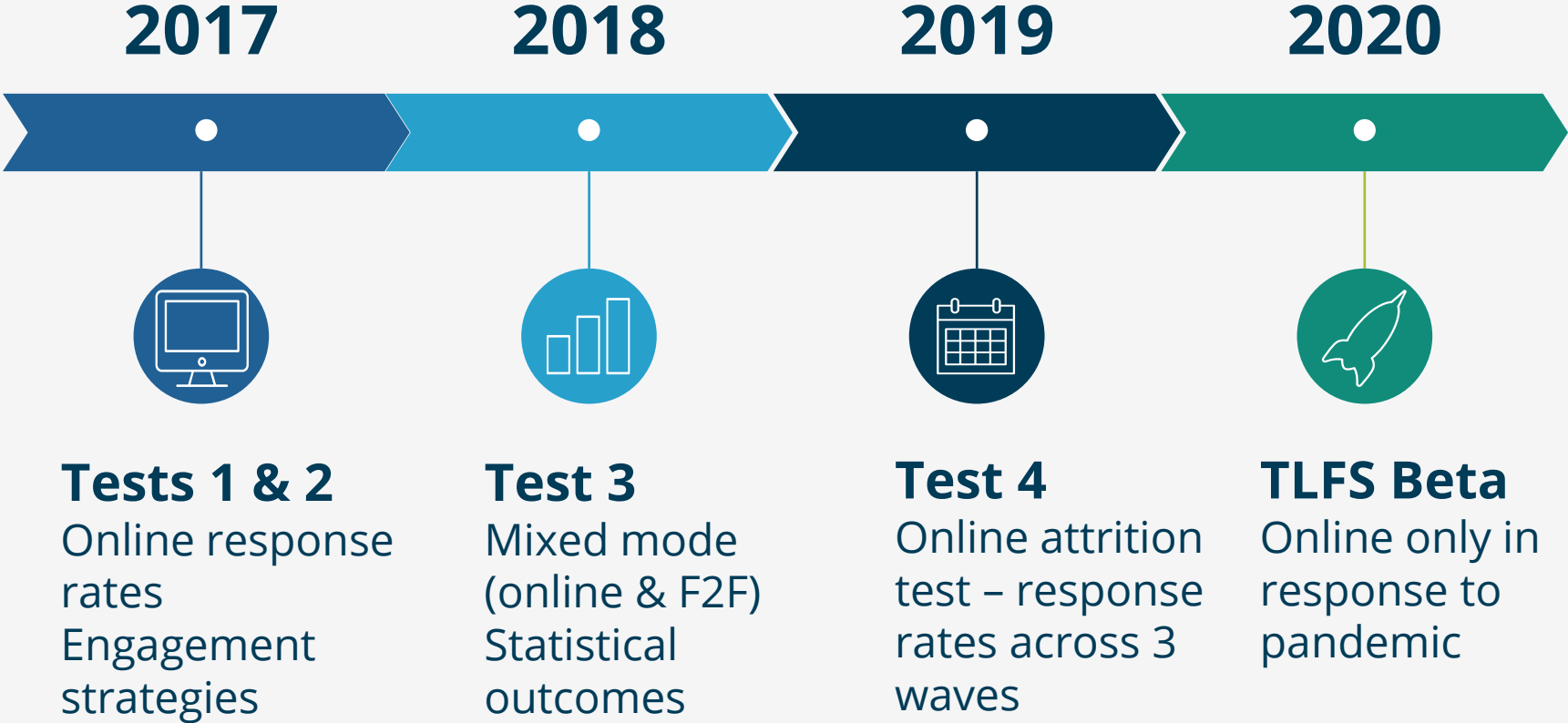**Respondent-centric approach**

Improving the experience for the respondent improves data quality and increases inclusivity

Responsive, data-driven design

Making best use of available data sources to target the right resources to those who need them most, driving up quality and operational efficiency

The transformation journey early stages

2017

2018

2019

2020

Tests 1 & 2
Online response rates
Engagement strategies

Test 3
Mixed mode (online & F2F)
Statistical outcomes

Test 4
Online attrition test – response rates across 3 waves

TLFS Beta
Online only in response to pandemic

Transformation since 2022

Further development of additional content →

Feb 22 **Apr 22** **Sep 22** **Nov 22** **Apr 23** **Jul 23** **Nov 23** **Jan 24** **Mar 24** **May 24**

Introduced telephone mode with telematching

Reached target sample size

All key labour market content now included

Implemented field mode "knock to nudge"

Expansion of field mode to wave 2

External peer review exercise

Final substantive updates to design and content

Decommission the existing LFS

Transformed LFS meets quality criteria to become primary source for LM Statistics

Transformed LFS is the primary survey data source for Labour Market Statistics

First release of Labour Market bulletin using Transformed LFS
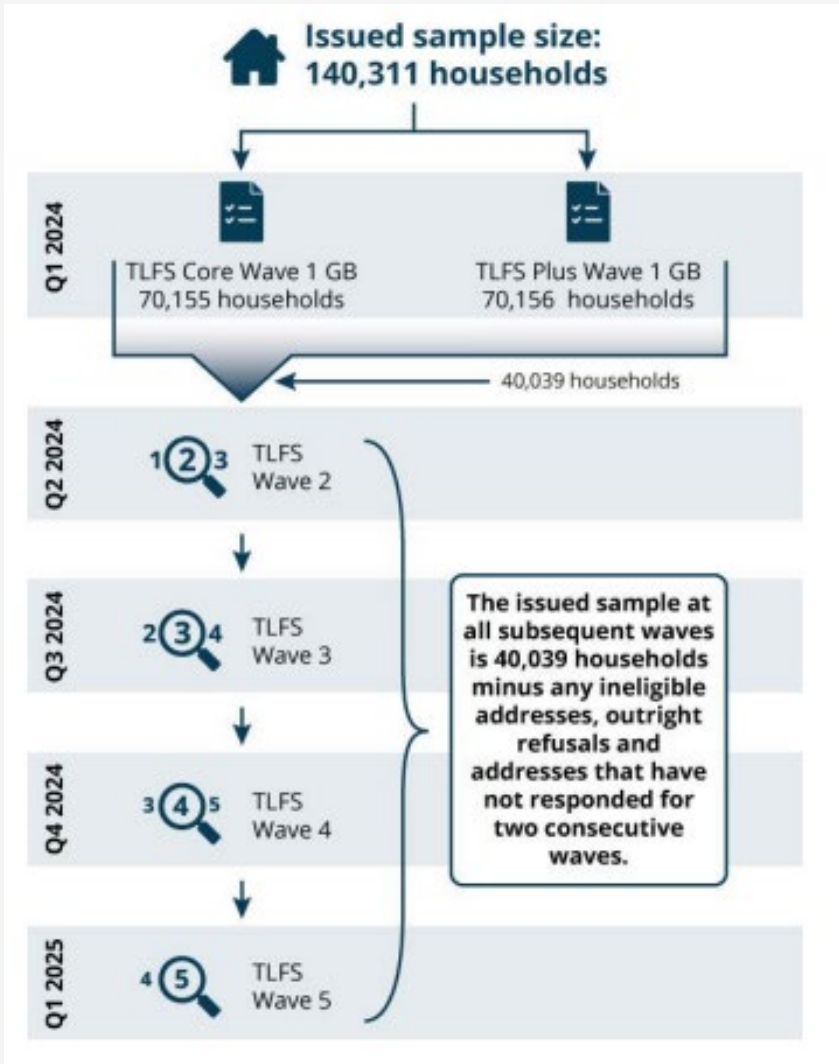
Implementing new approaches

TLFS sample design

Two different questionnaires at Wave 1

TLFS Core – 50% of the sample get a slightly shorter questionnaire covering key labour market topics

TLFS Plus – 50% of the sample get a slightly longer questionnaire with some additional questions

Only ~30% of Wave 1 cases are in the longitudinal sample and will be invited to take part in Waves 2-5. The TLFS Core questionnaire is used for waves 2-5.

Sample design

Address Frame

- AddressBase Premium - an Ordnance Survey/GeoPlace product comprised of local authority, Royal Mail and Council Tax data

- Private households only, no Communal Establishments

Sampling

- Systematic random sample within England, Wales and Scotland – all households in the sampling frame have an equal probability of being selected

- A boost to Scotland and Wales samples means they have a relatively higher country level samples relative to population size.

- Representative sample by geography, with the sample being allocated proportionally to the size of each geographic area within each country.

  - Based on mid-year population estimates for each Country and English Region.

- Northern Ireland sample entirely separate and administered by the Northern Ireland Statistics & Research Agency (NISRA)

Estimated achieved sample sizes

Economically active individuals

	LFS quarterly* OD22	APS annual* Oct21-Sept22	TLFS quarterly	TLFS annual
England	24,289	67,570	44,146	152,484
Scotland	2,418	9,579	7,216	23,419
Wales	1,422	8,823	5,759	19,239
Great Britain	28,129	85,972	57,121	195,142

*LFS/APS data include data brought forward, not currently included on the TLFS

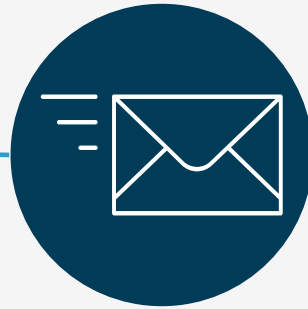# TLFS Wave 1 Respondent Timeline

Week 0

Pre-notification letter (1)

Week 1

Invitation letter (2)

Online data collection starts

Respondents can request a telephone interview via SEL

Week 2

Reminder letter (3)

Online data collection

Telephone interview by request

Week 3

Knock-to-nudge starts

Respondents can still complete online

Week 4

'Hard' completion deadline (Sunday)

Incentives

- All households will receive a Notepad at Wave 1 as an **unconditional** incentive

- This will be included with their 'Invite' letter (which also contains their Unique Access Code for the online survey)

- A £10 eVoucher is also offered as a **conditional** incentive – a paper voucher can be provided on request

- Eligiblity for this requires all members of the household to complete the survey
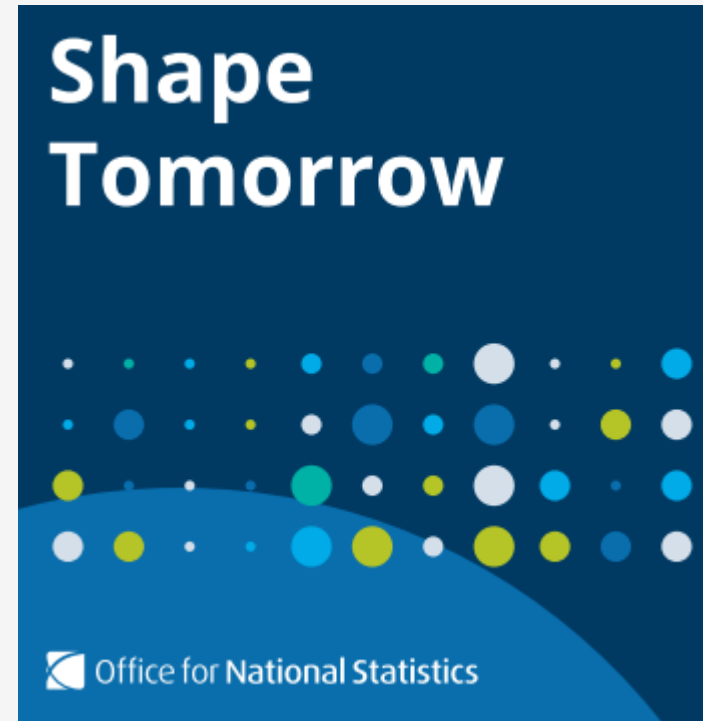
Focus for improved quality

1. Reducing Bias

- Achieve representative sample
- Focus on both national and local improvements
- Drive to maximise inclusivity
- Minimise variability in response across
  - Regions
  - Index of Multiple of Deprivation
  - Output Area Classification
- Design to achieve proportional samples by age, sex, disability, tenure, ethnicity

2. Reducing Attrition

- Reduce drop-off in response between waves
- Ensure sufficient sample size in wave 5
- Reduce impact of attrition on bias (especially by wave 5)

3. Improving Response

- Sufficient response in each area to meet quality targets
- Increased response must not introduce new bias
- Increased response should reduce:
  - Operational complexity
  - Respondent burden
  - Overall cost

Moving toward being Adaptive and Responsive

Draw the sample	→	Invite people to take part	→	Follow-up non-responders	→	Process the data
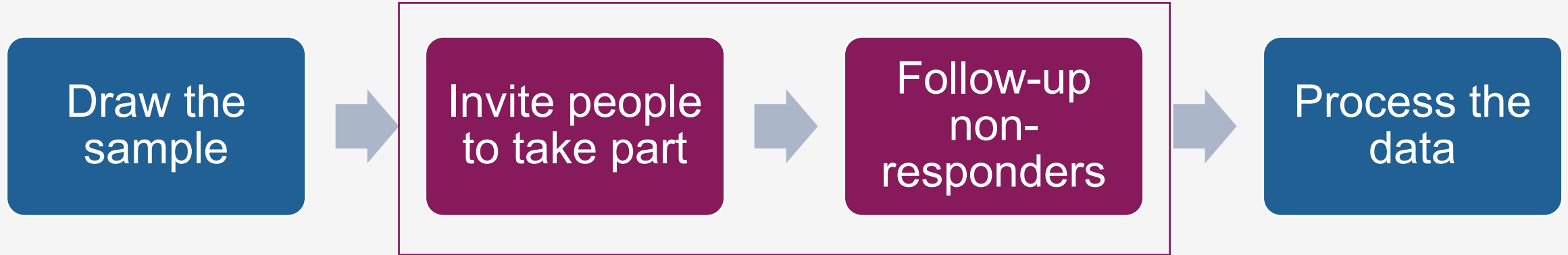
At each stage making the best use of available data sources to target resources effectively

Designing to optimise response, improve inclusivity and drive up data quality

What is Knock-to-Nudge?

Interviewers visit addresses (remain on doorstep) to encourage response via a telephone or online survey mode

- interviewer can build rapport
- less expensive
- can leave a 'called today' card

Implementing Adaptive Survey Design

Segmentation

Segmenting the survey sample into smaller groups of similar characteristics to apply alternative survey features for each group

1. Logistic regression model run on historical LFS data to **segment sample into 8 different strata**: age group (<45 v ≥ 45); Urban/Rural classification; Index of Multiple Deprivation (deciles 1-4 v 5-10)

2. Utilising **"knock-to-nudge" with geographic targeting for** under-represented strata

3. Investigating options such as different modes of collection, materials, incentives, timings, approaches to following-up, new tech or administrative systems all through a **structured 'trial and error' optimisation strategy** experimenting, evaluating, and improving features of the ASD

4. Moving beyond response rate using **Representativity Indicators** to measure the contrast between respondents and non-respondents including quality and cost indicators

Strata

Historical TLFS data were used to simulate whether the identified strata were likely to reduce the coefficients of variation.
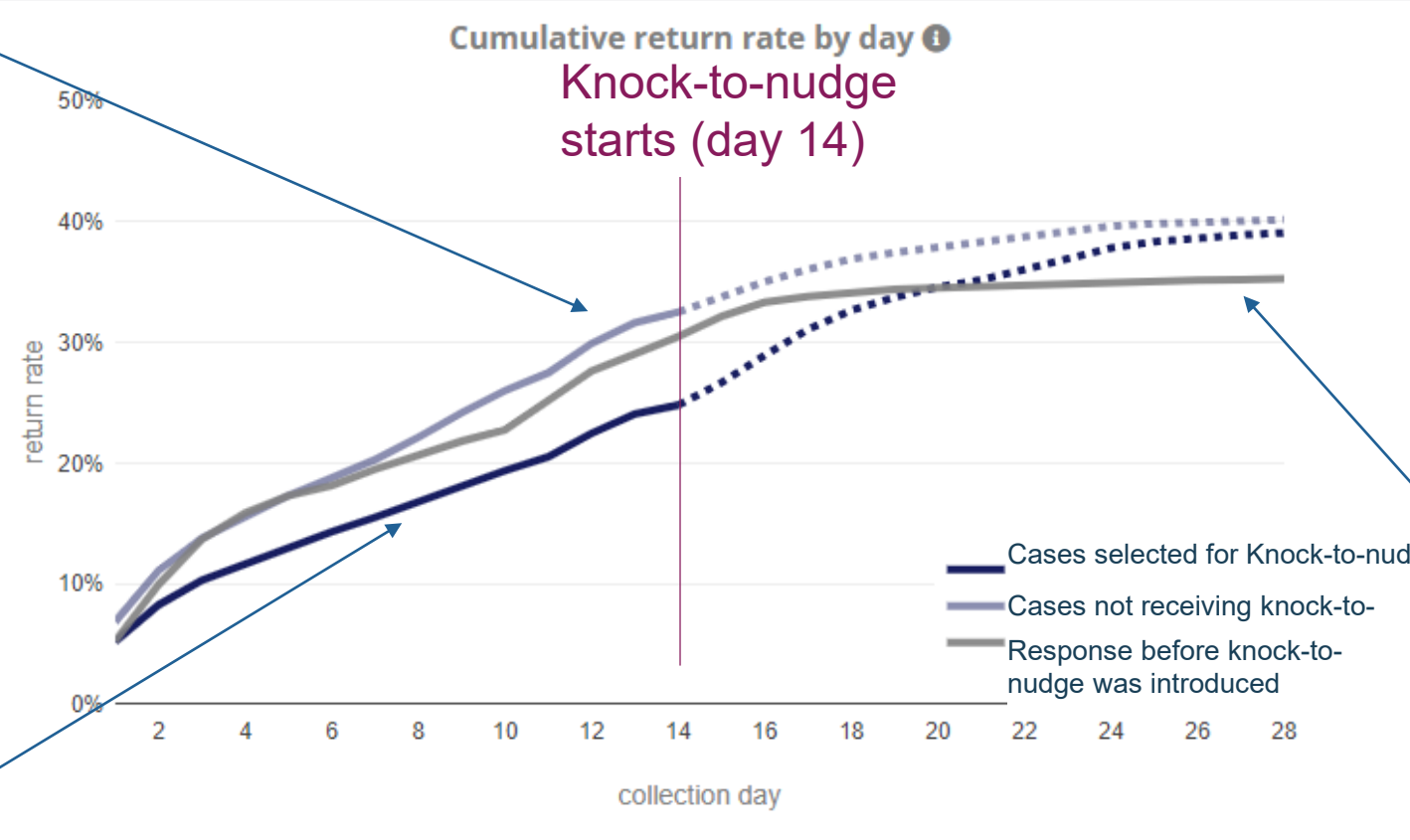
Strata	Urbanicity	Deprivation	Age group
1	Urban	Less deprived	45+
2	Urban	More deprived	16-44
3	Urban	Less deprived	16-44
4	Urban	More deprived	45+
5	Non-urban	More deprived	16-44
6	Non-urban	More deprived	45+
7	Non-urban	Less deprived	16-44
8	Non-urban	Less deprived	45+

Lower Super Output Areas (LSOAs) in Strata 2,3,4 & 5 were identified as those requiring knock-to-nudge visits

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Impact of Knock-to-Nudge on Response

Cases that won't receive knock-to-nudge visits (less deprived areas)

Cases selected to receive Knock-to-Nudge visits if they don't respond (areas with more deprivation, urban, younger people)

Cohorts before Knock-to-nudge was introduced

Cumulative return rate by day ⓘ

Knock-to-nudge starts (day 14)

return rate

50%

40%

30%

20%

10%

0%

2 4 6 8 10 12 14 16 18 20 22 24 26 28

collection day

Cases selected for Knock-to-nudge
Cases not receiving knock-to-
Response before knock-to-nudge was introduced

Questionnaire redevelopment

- Understanding and meeting the user need, not just a definition
- Understanding the respondent experience, ensuring collection is both respondent-centred and inclusive
- Using data to design and taking an 'optimode' approach
- Undertaking extensive systems-, flow- and cognitive-testing
- Maintaining consistency with standards and time-series where possible

Redesign – Employment in Reference Week

Original
- Did you do any paid work in the week ending Sunday the [date], either as an employee or self-employed?
- 'Paper work?' ;   "No, just my normal job"

v.1
- Did you do any work for payment or profit (including in self-employment) in the week ending Sunday [date], even for as little as one hour?
- National account definition;   "I would have said yes because they still gets holiday pay"
- "Well I was on holiday so I was paid"

v.2
- Did you have a paid job or business in the week Monday [date] to Sunday…?
- Job easy concept; do not have to be present in Ref, or paid in Ref;
- "I was paying myself a wage but nobody was paying the company… the question is are you talking about it as a business or not?" – Sole traders

v.3
- Did you have a paid job, either as an employee or as self-employed, in the week Monday [date] to Sunday [date], [year]?
- Better captures different self-employed types;
- "but if it had been 'self-employed' that would have been a yes"

Implementing new approaches

Industry & Occupation

- New machine-learning automated coding
- Produces confidence of matching
- Augmented with clerical coding
- Direct comparisons with manual coding

Quality of work

- Advisory panel for new employment measure
- New questions added to survey
- Improved analysis and outputs
- More targeted policy interventions

Methodological tailoring

- Full review of sampling and stratification
- Learning from alterations during the pandemic
- Integrating latest Census and population figures
- Improved approach to imputation and editing

New production system

- Utilising secure system on latest platforms
- Open-source modular software
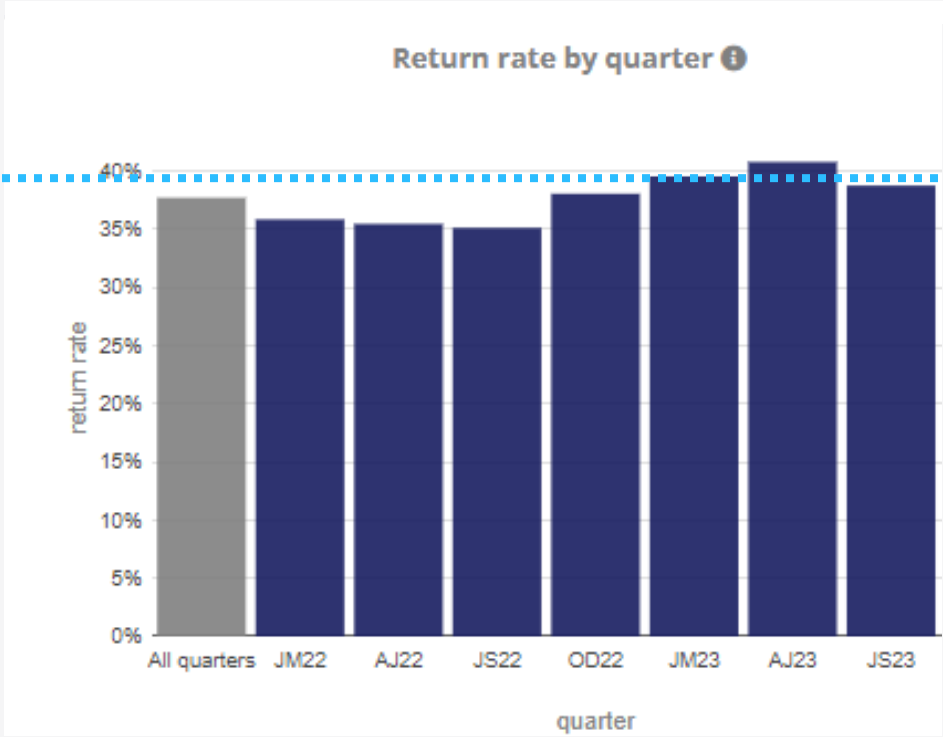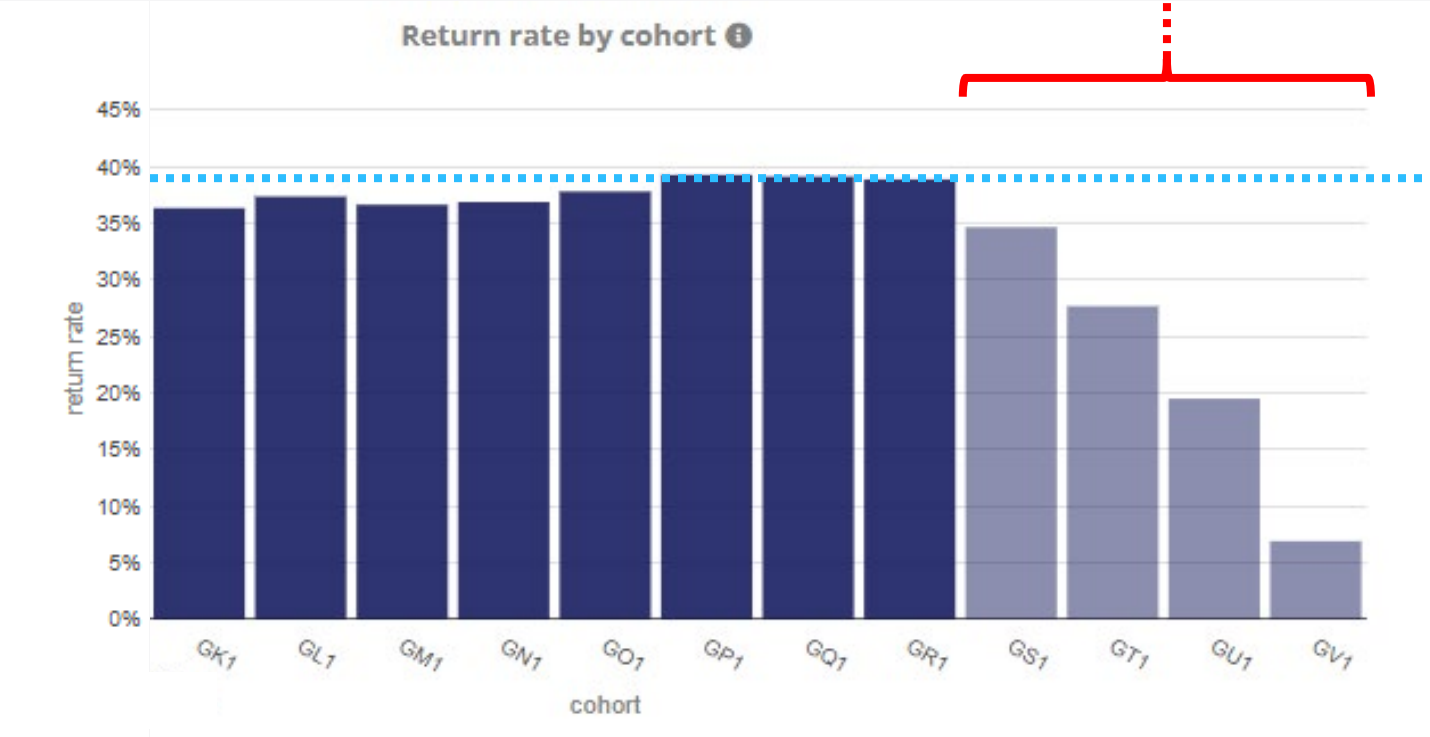- Upgraded with latest lookups and standards
- Designed with end-to-end flow

You are here

Current performance
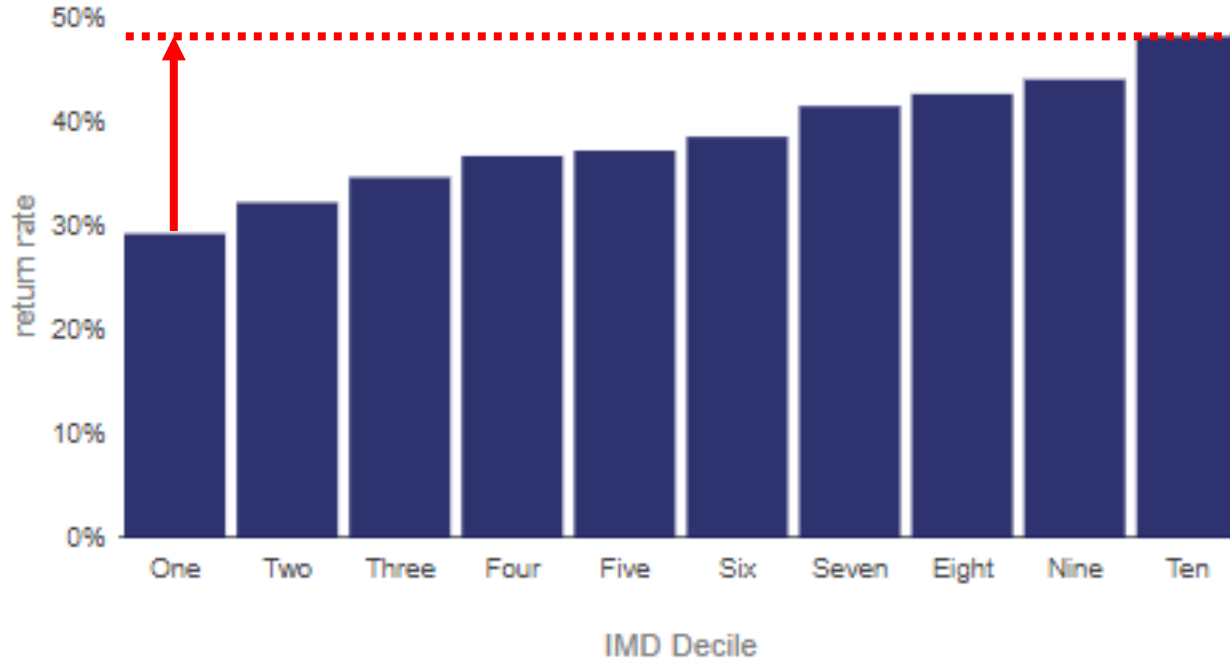
Overall return rate ~39%

(30% full + 9% partial)

Latest cohorts still being collected

Return rate by cohort ℹ
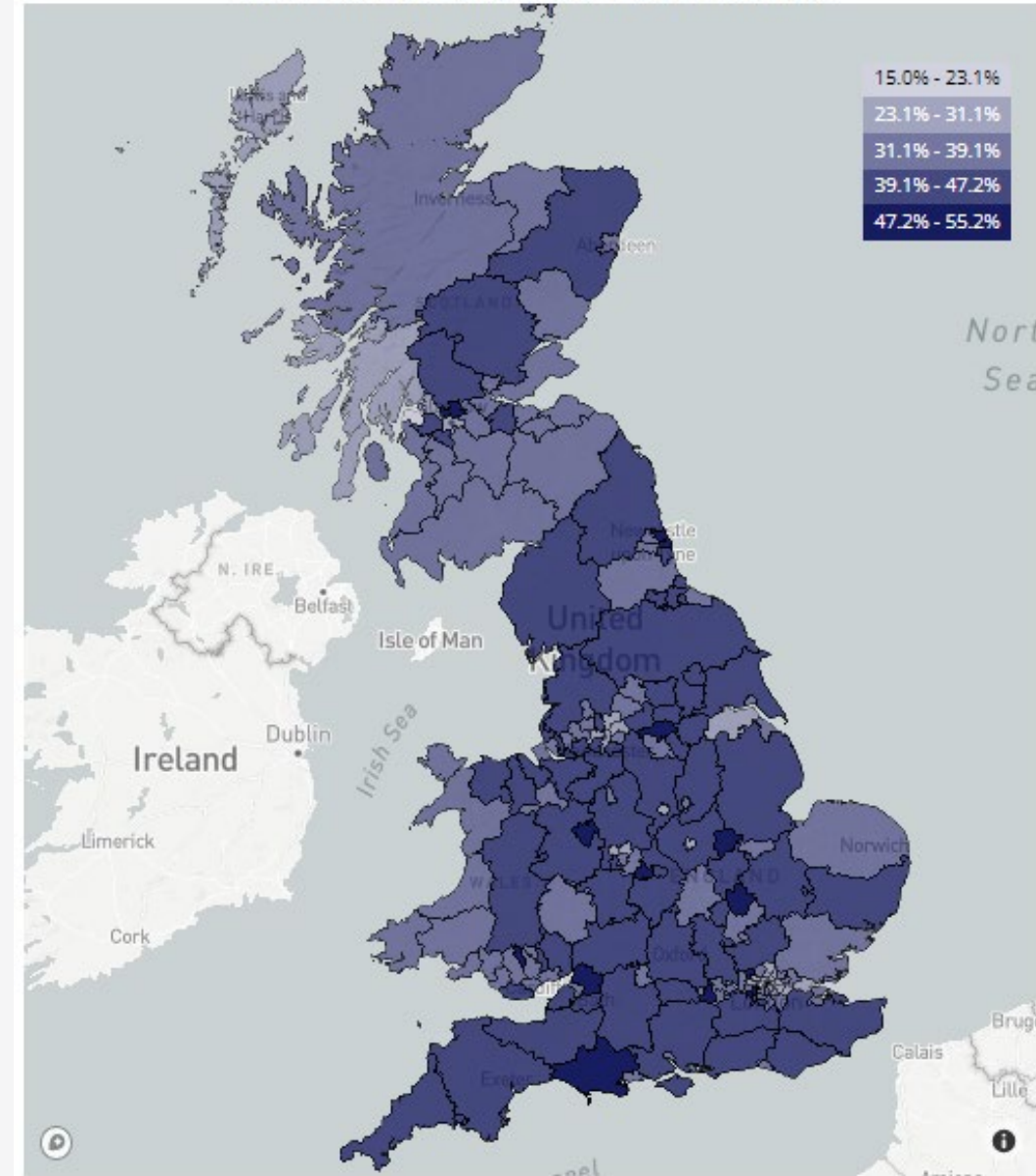
return rate

45%
40%
35%
30%
25%
20%
15%
10%
5%
0%

GK₁ GL₁ GM₁ GN₁ GO₁ GP₁ GQ₁ GR₁ GS₁ GT₁ GU₁ GV₁

cohort

Return rate by quarter ℹ

return rate

40%
35%
30%
25%
20%
15%
10%
5%
0%

All quarters JM22 AJ22 JS22 OD22 JM23 AJ23 JS23

quarter

Current performance

target = response
rate within double

Return rate by IMD Decile

Return rate by county and Unitary Authority

Changes being made late 2023/early 2024

- Improvements to translations in survey materials

- Changes to questions about employment status, disability, health and safety, well-being, trade union membership, internet usage

- Mechanical adjustments around routing and locking of questions

- Updating the [user guidance](#)

- Incorporating the latest released population figures in weighting

- Compilation of annual, longitudinal and household files and integration of results for GB and Northern Ireland
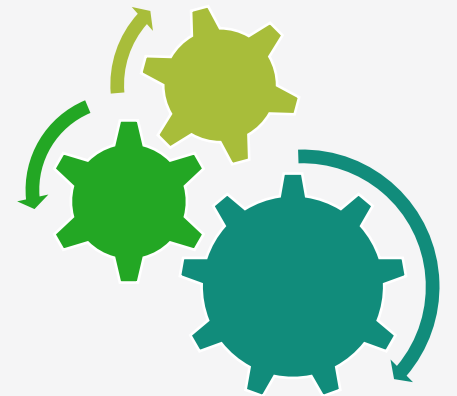
Progressing analysis, evaluation and review

- Evaluating and monitoring levels of bias, attrition and response

- Investigating discontinuity and continuous time-series production

- Compare coherence of TLFS results with LFS results and other sources, including for regular published bulletin tables

- Compare trend movements against LFS and other indicators, such as business surveys or admin data

- Working with teams across ONS, Devolved Administrations, other Government departments, and economic experts to peer review and provide feedback

What users can expect to see

- Continued delivery of microdata
- Continued delivery of Labour Market tables and Nomis
- Continued support, guidance and ongoing development
- Changes to the microdata, notably being in CSV format
- Changes to variables and response options
- Changes to time-series at lower-level breakdowns
- Revisions to time-series for continuity between LFS and TLFS

Taking this journey with our stakeholders

- Updating [user guidance](#) on an ongoing basis (next: Jan 2024)

- Providing quarterly project delivery [progress updates](#) (next: Jan 2024)

- Providing updates through newsletters, outreach events, and walkthroughs

- Giving presentations and updates at conferences and events

- Keeping in touch through Labour.Market.Transformation@ons.gov.uk

Trustworthiness

Quality

Value

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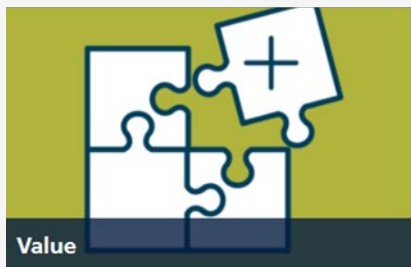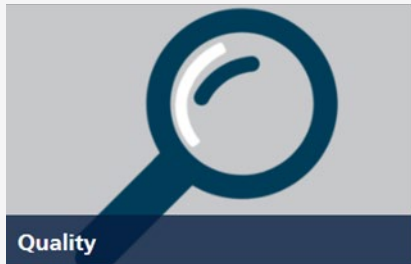
Celebrating 50 years of the LFS

**Ensure you're part of the journey
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Any questions?

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